

**Claims**

- 5 1. A sample holder for a mass spectrometer characterized in that it contains a coating comprising silicone and graphite.
2. Sample holder according to claim 1, wherein the coating layer having a thickness of 0,01 to 1 mm.
- 10 3. Sample holder according to claim 1 or 2, wherein the coating contains 1 parts by weight of graphite: 100 parts by weight silicone to 70 parts by weight graphite: 100 parts by weight silicone.
- 15 4. Sample holder according to claim 3, wherein the coating contains 10 parts by weight graphite: 100 parts by weight silicone to 30 parts by weight graphite: 100 parts by weight silicone.
- 20 5. Sample holder according to any of the preceeding claims, wherein the coating is prepared by polymerizing a silicone-forming monomer or prepolymer in the presence of graphite.
- 25 6. Use of silicone and graphite for coating a sample holder for a mass spectrometer.
- 30 7. A method of analyzing a sample in a mass spectrometer comprising the steps
  - (a) providing a sample holder containing a coating comprising silicone and graphite,
  - (b) applying the sample onto the sample holder and
  - (c) performing a mass spectrometry analysis of the sample.
8. The method according to claim 7 further comprising a step

(b1) washing the sample holder after application of the sample thereto to remove contaminations from the sample.

- 5 9. A method according to claim 8, wherein in the washing step b1, salt contaminations are removed.
10. The method according to any of claim 7-9, wherein the mass spectrometry analysis comprises a laser desorption step.
- 10 11. Use of a mixture comprising silicone and graphite in mass spectrometric analysis.
12. Use according to claim 6 or 11, wherein the mixture comprises 1 parts by weight of graphite: 100 parts by weight silicone to 70 parts  
15 by weight of graphite: 100 parts by weight silicone.
13. Use according to claim 6 or 11 to 12, wherein the mixture is provided in a thickness of from 0,01 to 1mm.